

Three New Parasitic Mites from the Ethiopian Region (Acarina: Laelaptidae)

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Recently we published a preliminary study of the Ethiopian Laelaptid mites parasitic on vertebrates (1951). It was quite clear to us then that this was but a beginning. Many more new genera and species would be discovered and described, and there would have to be several taxonomic changes before we could say that we had a sound knowledge of the Ethiopian fauna of this group.

We are greatly indebted to a number of collectors and collaborators, who constantly send us material and take a great interest in our studies of the ectoparasites of African vertebrates. The mites described in this paper were sent to us by Dr. R. F. Lawrence, Natal Museum, Pietermaritzburg, Dr. J. B. Walker, Kabete, Kenya, and Mr. R. A. Reed, of the Johannesburg Bird Club.

***Neospinolaelaps miniopteri* gen. et. sp. nov.**

Dr. R. F. Lawrence, Natal Museum, recently sent us two female Laelaptid mites from the bat *Miniopterus natalensis* Smith. These proved to be of a new genus and species.

This species is closely related to another bat infesting mite from Kenya, on which Radford (1940) based the genus *Spinolaelaps*. *Neospinolaelaps* is separated from this genus by the genito-ventral plate having only 5 setae. In our key to the Laelaptidae this new genus runs down to *Radfordilaelaps* Zpt., having three setae on the genito-ventral plate.

Genotype: *Neospinolaelaps miniopteri* n.sp.

Neospinolaelaps miniopteri n.sp. is, like *Spinolaelaps jacksoni* Rfd. a relatively small Laelaptid mite of about 0.4 m., the dorsal and ventral sides of which are strongly reticulated and provided with stout, relatively short hairs.

Female (fig. 1). The dorsal plate is oval, with pronounced shoulders and a clear reticulation. Its length is 0.33 mm. in the holotype and 0.31 mm. in the paratype, its width 0.18 mm. and 0.16 mm. in the holotype and paratype respectively. In both specimens the idiosoma is extended beyond the lateral and hind margin of the dorsal plate, reaching a total length of about 0.4 mm. The soft parts of the idiosoma are also clearly reticulated, but here the reticulation consists of delicate closely placed transverse lines, quite distinctly different from the reticulation of the dorsal plate. The hairs of the dorsal plate are relatively short and stout. There are 29 pairs on the dorsal plate itself, with additional ones on the soft parts of the opisthosoma. The epistome is narrow and crescent shaped.

Venter with the sternal plate broader than long, its length and greatest transverse diameter being 0.07 and 0.06, and 0.115 and 0.09 mm. in the holotype and paratype respectively. The reticulation is distinct, and it bears three setae. Presternal area weakly reticulated. Tritosternum bipartite. The metasternal pair of hairs are free, but just lateral to each hair is a small triangular metasternal plate. Genitoventral plate short and broad, the outer margin not very clear, bearing 5 setae; reticulation similar to that of the dorsal plate. Metapodal plates quite indistinct, probably not present. Anal plate semicircular with the usual three hairs, reticulation as in the dorsal plate. Uncovered area of the opisthosoma with about twenty pairs of hairs. Stigma opening near the 4th coxa, peritreme reaching the 1st coxa.

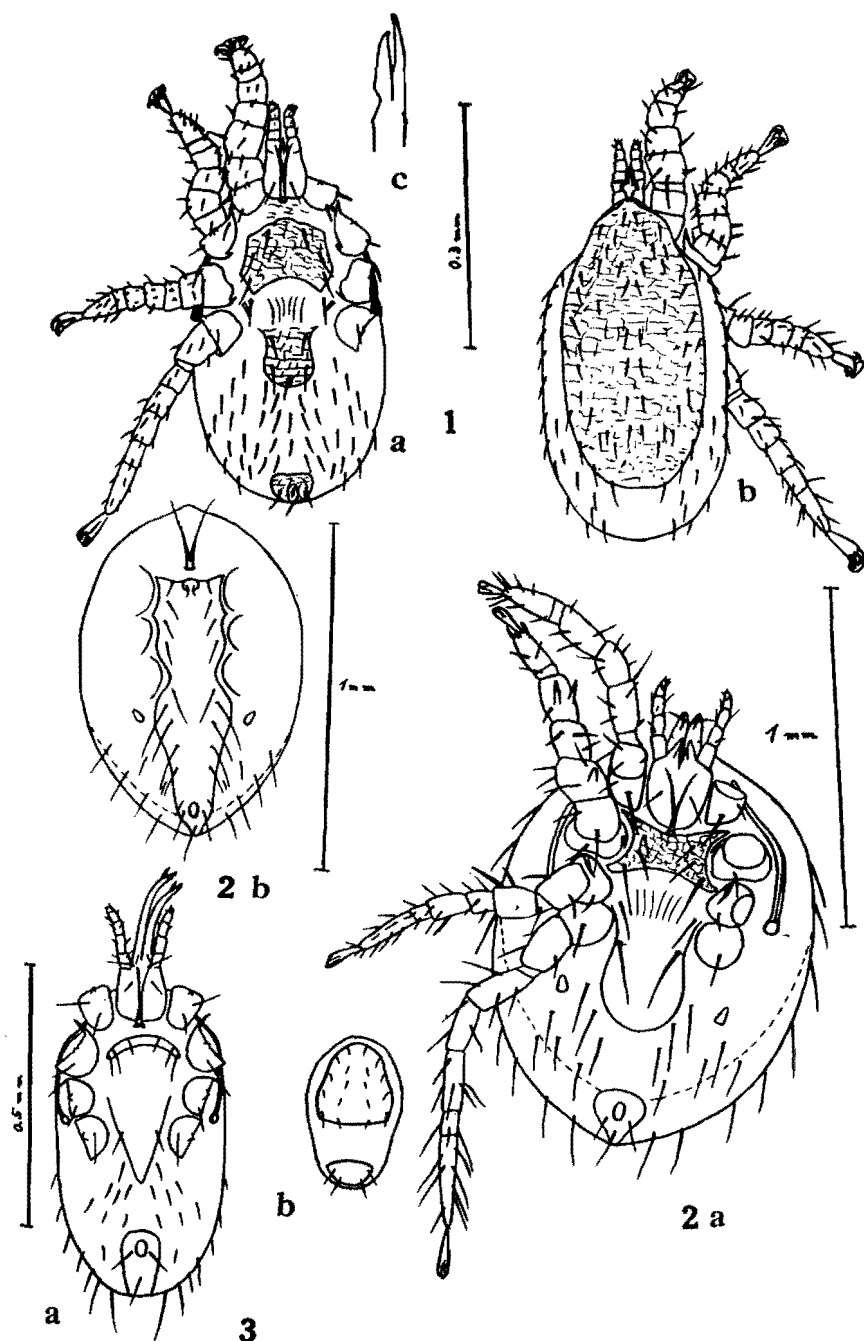
Legs I and II stout, III and IV more slender. Claws strong; pulvilli probably developed but indistinct in the two slides before us. Chelae shear-like, without setae and teeth as in *Liponyssinae*.

Male and immature stages unknown.

The two females were collected by Dr. R. F. Lawrence in the Noodsberg Caves near Pietermaritzburg, Natal, from *Miniopterus natalensis* Smith, March, 1951. The holotype is in the collection of the Natal Museum, Pietermaritzburg, the paratype in the collection of the South African Institute for Medical Research, Johannesburg.

LEGEND TO FIGURES

1. *Neospinolaelaps miniopteri* gen. et. sp. nov.
 - (a) Ventral view of female. (b) dorsal view of female. (c) Chelae of female.
2. *Androlaelaps graingeri* n. sp.
 - (a) Ventral view of female, outline of dorsal plate dotted.
 - (b) Ventral view of male.
3. *Steatonyssus reedi* n. sp.
 - (a) Ventral view of female.
 - (b) Dorsum of protonymph.



Androlaelaps graingeri n.sp.

The female of *A. graingeri* is distinguished from all other *Androlaelaps* species by a short and stout body, the dorsal shield having an index of only 1.1-1.2. With regard to the chaetotaxy of the venter and to the shape of the genital plate, the female is similar to *A. africanus*. The male however looks much like *A. theseus* but is again distinguished by the shorter and stouter body.

Female. The measurements of the dorsal shield vary from 0.96-1.05 mm. in length and from 0.81-0.87 mm. in width. In engorged specimens the total length and width of the body (without capitulum) may reach 1.17 mm. and 0.96 mm. respectively. The narrowest width of the sternal plate varies from 0.017-0.25 mm., the length in the midline is from 0.08-0.14 mm.

The dorsal plate covers the whole body in unfed specimens; in engorged ones the soft part of the idiosoma is distinctly distended terminally. The hairs are thin, sparse and relatively long; the apical portion above the epistome has six stronger bristles.

Venter (fig. 2) with the sternal plate almost twice as broad as long, and with all four corners strongly pointed. The sternal plate is weakly sclerotized so that the reticulations are not clear and the anterior and posterior margins are not distinct. This fact accounts for the index being variable between 0.3-0.6. The normal three pairs of bristles and two pairs of pores are present. The genital plate is separated from the anal plate by a wide interstice. It is similar in shape to those of *A. africanus* and *A. africanoides* and is bordered by three pairs of hairs, the last being situated between it and the anal plate. The remaining soft part of the venter is sparsely beset with long and very fine hairs. There is one pair of distinct metapodal plates behind the last coxae. The anal plate is pear shaped, being as long as broad. The stigma opens between the third and fourth coxae, the peritreme reaching to the first coxa.

The legs, except for the second pair, are slender. The tooth on the ventral surface of the second femur is short and blunt. The epistome is short, broader than long and has two narrow median protrusions. The chelae are strong, the digitus fixus has a long and distinct bristle-like seta.

Male. The measurements of the dorsal shield vary from 0.8-0.9 mm. in length and from 0.6-0.7 mm. in width. Specimens with a distended opisthosoma reach 0.92 mm. in length. Ventral shield (fig 2b) has four pairs of sternal hairs and 15 (7 pairs + 1) hairs on the genito-ventri-anal part.

Immature stages. Unknown.

The description is based on females and males which were collected by Mr. W. E. Grainger of the Health Department Kabete, in the Kerio Valley, Kenya, on the 29th and 30th November, 1949. Unfortunately the host, a rodent was not identified. The holotype (♀) and paratypes (♀♀ and ♂♂) in the collection of the South African Institute for Medical Research, paratypes (♀♀ and ♂♂) have been returned to the E. African Veterinary Research Organisation, Kabete, Kenya.

***Steatonyssus reedi* n.sp.**

This is the fifth *Steatonyssus* species recorded from the Ethiopian region (cf. Zumpt and Patterson, 1951). It is related to *St. biscutatus* Hirst and like this mite is also found in bird nests. *St. biscutatus* is, however, parasitic on the woodpecker *Dendropicos fuscescens*, whereas the new species was found in the nest of the masked weaver, *Hyphantornis velatus*.

The main differences between *St. reedi* and *St. biscutatus* lie in the shape and degree of sclerotization of the sternal plate. In *St. reedi* the sternal plate is very narrow, crescent-shaped and almost smooth, in which respects it resembles the bat infesting mite *St. natalensis* Zpt. & Patt. However the shape and chaetotaxy of the two dorsal shields are almost identical with that of *St. biscutatus*.

Female (fig. 3a). — Dorsal shield weakly sclerotized, podosomal plate in the holotype 0.268 mm. long, in the paratypes varying between 0.237 — 0.279 mm., with 9 pairs of hairs; opisthosomal plate in the holotype 0.299 mm. long, in the paratypes between 0.258 — 0.32 mm., with 6 pairs of hairs. The total body length (without capitulum) reaches 0.63 mm.

Sternal plate weakly sclerotized without any recognizable reticulation, arched, very narrow, with three pairs of setae. Genital plate elongate and pointed with one pair of short genital hairs. Anal plate twice as long as broad, tip truncated, with the usual three setae. Peritreme tube shaped, reaching the first coxa anteriorly. Legs slender with well developed claws and pulvilli. The measurements of the legs of the holotype are as follows (in μ , without claws).

Number of leg	Tarsus	Tibia	Genu	Femur	Trochanter
I	120	67.5	67.5	67.5	50
II	110	60	60	60	55
III	105	62.5	65	60	55
IV	157.5	70	70	70	70

Male. Unknown.

Nymphs. We have 5 nymphs before us. All have a large podosomal plate and a small opisthosomal plate (fig. 3b). The sternal plate which is more or less hexagonal and has 3 pairs of setae, covers the whole venter between the coxae. The total body length varies between 0.28 — 0.37 mm. The specimens probably represent the protonymphal stage in various states of engorgement, perhaps the difference in size might also be accounted for by a difference in the sex of the nymph.

We received 13 ♀ and 5 nymphs from Mr. R. A. Reed, of the

Johannesburg Bird Club, after whom the species is named. The specimens were collected from the nests of *Hyphantornis velatus velatus*, at Bryanston, Johannesburg, on January 5th, 1952.

REFERENCES

- RADFORD, C. D. (1940). Notes on some new species of parasitic mites. Pt. 3. *Parasitol.*, 32, 91.
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